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ABSTRACT

From 1967 to 1982 federally funded research in psychology became increasingly dependent upon money from the Department of Defense and the Department of Health and Human Services. This is a return to the funding patterns that existed prior to the Korean war. While exact comparisons cannot be made with figures from before 1967 (because of changes in reporting procedures), it appears that research in psychology went through a period of rapid growth in funding and an increase in the diversity of funding sources from the end of the Korean war to 1967. Since 1967, budget constraints seem to have caused federal agencies to define more closely their mandates and eliminate research they do not consider central to their mission. Since it is usually not seen as central to these mandates, psychology research is an easy target for budget reductions. (IS)

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RESEARCH FUNDING FOR PSYCHOLOGY AND OTHER SCIENTIFIC DISCIPLINES: AN ANALYSIS

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In this paper, I will present historical data on federal research funding for psychology in comparison to research funding for other scientific disciplines. I will try to show that research in psychology has grown increasingly dependent on two sources of funds since 1967--the Department of Defense and what is now known as the Department of Health and Human Services. I will also present data to show that between the end of the Korean War and 1967 psychology went through a period of extremely rapid growth in research funding that included a concomitant increase in the diversity of programs providing support to the discipline.

Before presenting any data, I must give a few warnings about the data themselves. First, all the data presented today comes from the National Science Foundation. Data before 1967 are not comparable to data in 1967 and later years. There are definitional and reporting inconsistencies before 1967 that cannot be overcome and render comparisons of earlier data with later data meaningless.

Second, data for research in psychology were not reported separately until 1959. Prior to that time most research in psychology was reported as life science, with a significant minority classified as social science and as other scientific disciplines.

Third, Historical data for the years 1967 to 1975 have been modified considerably from the figures NSF reported annually at the time. These modifications were necessary to achieve consistency with data after 1975. In making these modifications, NSF also aggregated certain federal programs that are of interest separately to psychology, such as the Veteran's Administration (VA) and what is now the Department of Education (ED). It is not possible to study trends in these aggregated agencies except on an overall basis.

Finally, funding in psychology is underrepresented in NSF data by unknown amounts that may vary from year to year. For example, the Department of Energy (DOE) has never reported any research in psychology, although I know individual investigators who have received DOE support in some years. Similarly, there have been individual years (e.g. 1981) when ED has claimed no research in psychology, a position we know to be grossly in error. In spite of these limitations, the NSF data are the best available for analyses of this type. They are reasonably consistent from year to year, and their limitations are known.

The Post-Sputnik Era

Support for psychology more than quadrupled during the post-sputnik era. NSF figures showed a 324% increase in federal obligations for research in psychology between fiscal years 1959 and 1965, but this figure should be taken only as a ballpark estimate due to data problems explained earlier.

This compares quite favorably with support for research in all scientific and engineering disciplines, which NSF showed increasing about 250% during the same seven year period. Science was booming, with annual rates of increase across disciplines ranging from a low of 21% to a high of 39%.

Psychology had been discovered, and these large increases led up to what senior scientists today look back upon as the "good old days" of the 60's. Inflation was relatively low, so these very large increases take on additional significance when one is discussing changes in buying power. By any measure, research dollars were in relatively plentiful supply.

Viet Nam and the Nixon Years

The Viet Nam War took its toll on research during the Johnson administration. Annual rates of increase for all scientific fields dropped below 10% after the assassination of John F. Kennedy and below 5% in the last Johnson years.

Under President Nixon science fared no better. During the first complete fiscal year of his administration (FY 1969), research support for all disciplines actually declined in current dollars, the only such year since NSF began keeping records. Support later increased during the Nixon administration, but only by 20% total up to his resignation in 1974.

Psychology fared even worse. Support for psychology increased less than 15% during the Nixon years, with 84% of that increase coming in a single year (1970). But looking at historical figures for research obligations does not tell the whole story of the period. President Nixon attempted to hold back funding for psychology far more than the Congress allowed him to do, and his attempts to abolish the National Institute of Mental Health were thwarted only by intense advocacy efforts by APA and other interested groups. That funding for research in psychology increased at all during this period is a tribute to those who were politically active on behalf of the discipline.

Ford, Carter, and Reagan

Psychology did better under Presidents Ford and Carter in current dollars, but inflation was heating up so much that little was gained in buying power. The increase from FY 1973 to 1980 for psychology was 81%, but inflation was in double digits during some of this period.

The first two Reagan years saw research in psychology increase 9.7%, a figure that may surprise some in the audience. With inflation moderating, the Reagan years, while hardly matching some of the increases of the past, turned out to be less grim than many had feared. But, the caution of the Nixon era is even more relevant here. President Reagan attempted to cut back on psychology much more than Congress allowed him to, and APA, the Consortium of Social Science Associations, AAP, and other groups were clearly influential in protecting the discipline. Put another way, it was a very hard earned 9.7%.

Comparing Psychology to Other Disciplines

Comparisons of psychology to other disciplines following the post-sputnik boom result in some depressing news. In the sixteen years 1967-82 inclusive, research support for psychology increased 111%, about the rate of inflation over the same period. All fields of science combined increased 181% during the same time. Only the social sciences fared worse than psychology (see Table 1 & Figure 1).

Calculating annual rates of increase from 1967 to 1982 is equally grim. The annual increase in psychology only topped the rate of increase for all sciences in four of fifteen years, fewer than for any other branch of science or engineering.

Why did this occur? Why, after the phenomenal growth of psychology in the post-sputnik years has the field expanded so little since then? Table 2 and Figures 2 & 3 give us a clue.

In 1953, Young and Wilson reported that 78% of the support for research in psychology came from DoD. Much of the rest came from what is now known as HHS. NSF, originally prohibited by Congressional Charter from the support of the behavioral and social sciences, had not yet entered the picture. Psychology was a two-agency science.

During the post-sputnik era, that changed. Support for psychology blossomed at many federal agencies, including NSF, NASA, the Office of Education, Department of Commerce, the Civil Service Commission, Department of State, the Federal Aviation Administration, the Arms Control and Disarmament Agency, and under Presidents Kennedy and Johnson, the programs of the New/Great Society and the War on Poverty (e.g., the Peace Corp, Office of Economic Opportunity, etc.).

In fiscal year 1967, DoD and HHS together accounted for only 64% of total federal funding for research in psychology--due not to decreases at those departments, but due instead to increases in the variety of programs supporting psychology.

Since 1967, we have seen a gradual return to the funding patterns of the early 1950's. In 1982 NSF reported that 89.4% of research funding for psychology came from DoD and HHS. Figure 2 documents the growth of support for psychology at these two departments expressed as a percentage of total federal obligations for research in psychology. Table 2 shows that only at DoD and HHS was there any substantial growth in research support over the entire 15 year period. Psychology is once again a two-agency science.

Even the category "other agencies" hides a shift in support patterns. While the exact figure was not readily available from NSF, the VA accounted for approximately one-sixth of the "other agencies" figure in 1967. In 1982 the VA accounted for 54% of the category. That means that DoD, HHS, and VA together accounted for nearly 95% of total federal research funding in psychology in 1982.

What Caused the Shift?

No one can say for sure what caused the shift in sources of support that occurred between 1967 and 1982. In some cases, admittedly, it may reflect only reporting error. A few agencies actually tried to hide their research in psychology when President Reagan announced his policies of cutting social research in an effort to protect their research budgets, so in some cases psychology may have been reported as another discipline. Unfortunately, not all of the shift in funding can be explained so easily. In many cases the budget cuts were real.

One characteristic of the programs that declined in support for psychology is worth noting. In almost every case, psychology declined where it was supported by an agency whose primary mission was something other than psychology, especially where there was no specific program within the agency identified as having a mandate to support psychology. In most such programs, although support for psychology had grown during the post-sputnik era, such support was still a small minority of the total agency budget.

During the post-sputnik era of growth, when there had been money to go around, these programs had expanded into topics such as psychology, which their administrators considered to be peripheral to their primary missions. However, when Viet Nam hit and inflation squeezed everyone's research budgets, agencies "got back to basics," which often did not include psychology--unless psychology was included in the agency mission statement or had a discrete, identifiable program within the agency.

The real issue for this symposium is, why was psychology considered peripheral to the missions of the many programs that had been supporting it, and why, therefore, was it considered expendible when the budget crises of Viet Nam and inflation hit?

I see an explanation that appears reasonable. The agencies had not redefined themselves or their missions to include psychology, because the individuals in charge of the various programs were not trained in psychology and may not have had any staff members trained in psychology either. What they did realize was that some of the research they found themselves supporting in the post-sputnik era differed considerably in focus and perhaps in methodology from anything they had learned to appreciate in graduate school or while working as a scientist. When the budget crunch hit, however, psychology could be eliminated easily from the research portfolio of the agency, because the agency mission statement did not require its support, and because there was no one of particular influence on the staff to argue in favor of its retention.

Why were mission statements not changed, and why were psychologists not hired to serve on the staffs of these agencies? I can only speculate that those running the research programs of the federal government never became convinced of the potential of psychological research to make contributions to their research problems. This could have occurred either because the relatively short-term support for psychology up to that time had simply been insufficient to produce payoffs important to the agency, or because those in charge of research programs had failed to understand the importance of the work they had supported, even when such relevance or applicability might have been readily apparent to anyone trained in psychology

The outcome was the same in either case. Psychology experienced a version of the "Last Hired, First Fired" phenomenon. In the absence of a compelling reason to support psychology, administrators busily cut their budgets where they felt it would do the least harm. They concluded psycholology was one of those areas. It was not in the mission of the agency, no one on the staff was willing to "go to bat" for psychology in agency budget deliberations, and the work that had been supported may not have been widely understood or influential in shaping agency policy. Cutting the budget in psychology was,therefore, the easiest thing to do, and cut they did.

Table 1

Federal Obligations and Percent Change in Support for Research by Field of Science: Fiscal Years 1967 and 1982

(current dollars in millions)

	FY 1967	FY 1982	% Change
Life Sciences	1,348.3	4,745.5	+252
Psychology	103.6	218.4	+111
Physical Sciences	939.6	2,500.4	+166
Environmental Sciences	381.8	1,148.3	+201
Math & Computer Science	128.4	350.1	+173
Engineering	1,425.2	3,386.5	+138
Social Sciences	189.1	385.9	+104
Other Sciences	115.4	287.0	+149
Total	4,631.4	13,022.2	+181

Note.--Numbers in columns may not add to totals due to rounding error.

Source: National Science Foundation

Table 2

Federal Obligations and Percent Change in Support for Research in Psychology: Fiscal Years 1967 and 1982

(Current dollars in thousands)

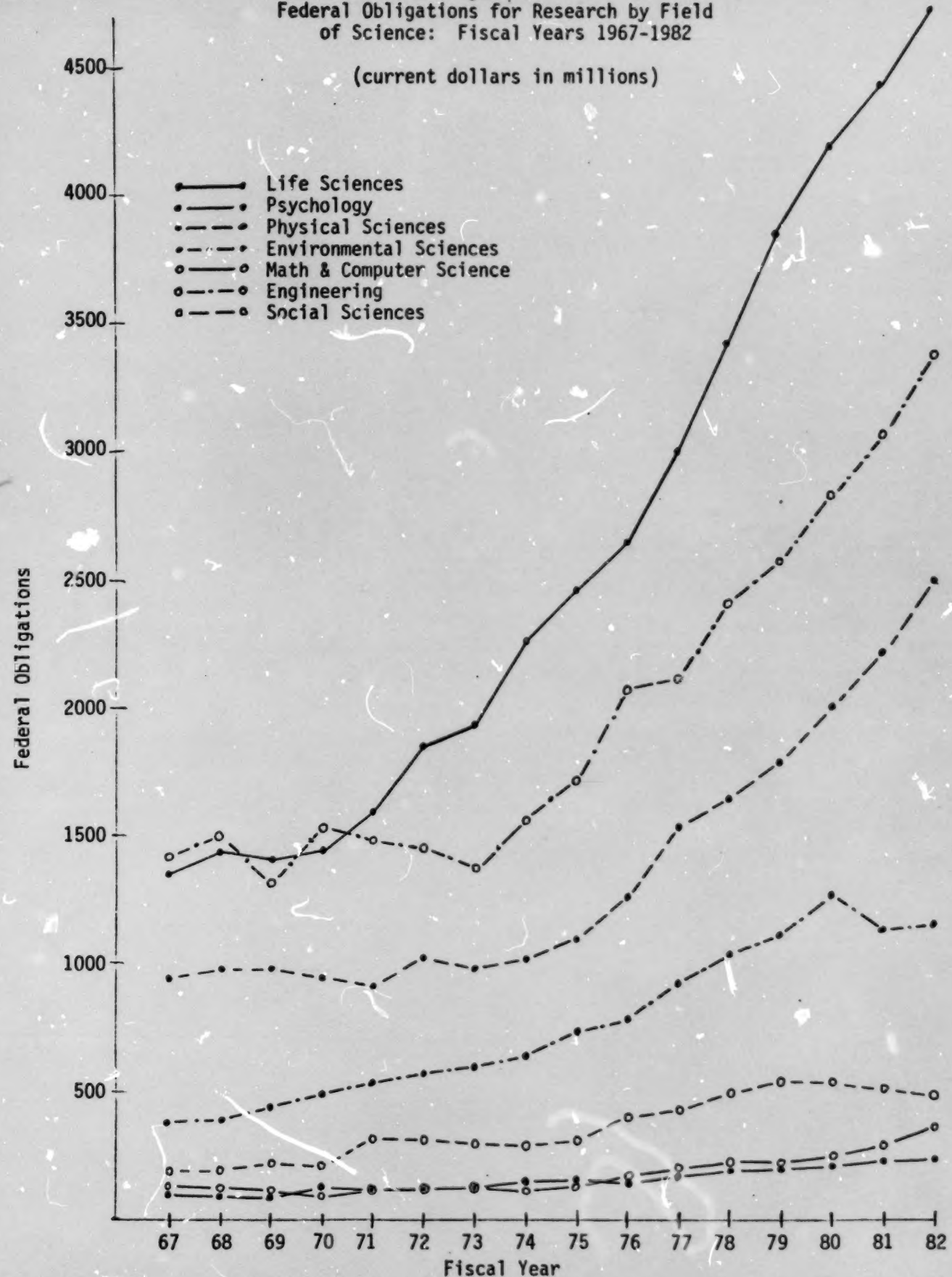
	FY 1967	FY 1982	% Change
Agriculture	0	185	n/a
Commerce	446	192	-57.0
Defense	23,438	83,491	+256.2
Health/Human Services*	42,506	111,776	+163.0
Interior	871	0	-100.0
EPA	n/a	575	n/a
NASA	3,691	2,115	-42.7
NSF	8,040	8,271	+2.9
All Other Agencies	24,576	11,791	-52.0
Total	103,568	218,396	+110.9

*Data for Fiscal Year 1967 represent obligations of the Department of Health, Education, and Welfare minus data for the Office of Education, the National Institute of Education, and the Office of the Assistant Secretary for Education.

Source: National Science Foundation

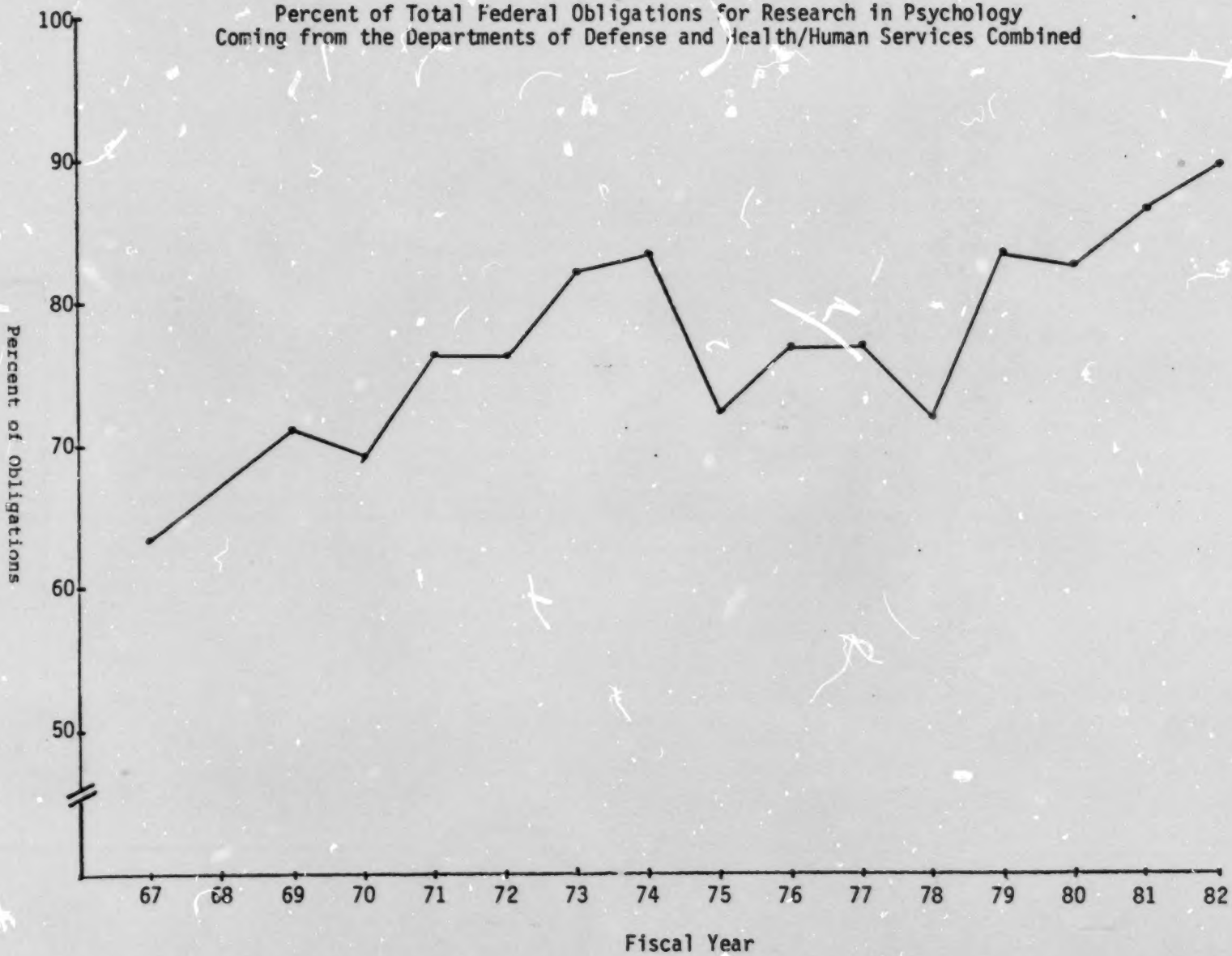
Figure 1
Federal Obligations for Research by Field of Science: Fiscal Years 1967-1982

(current dollars in millions)



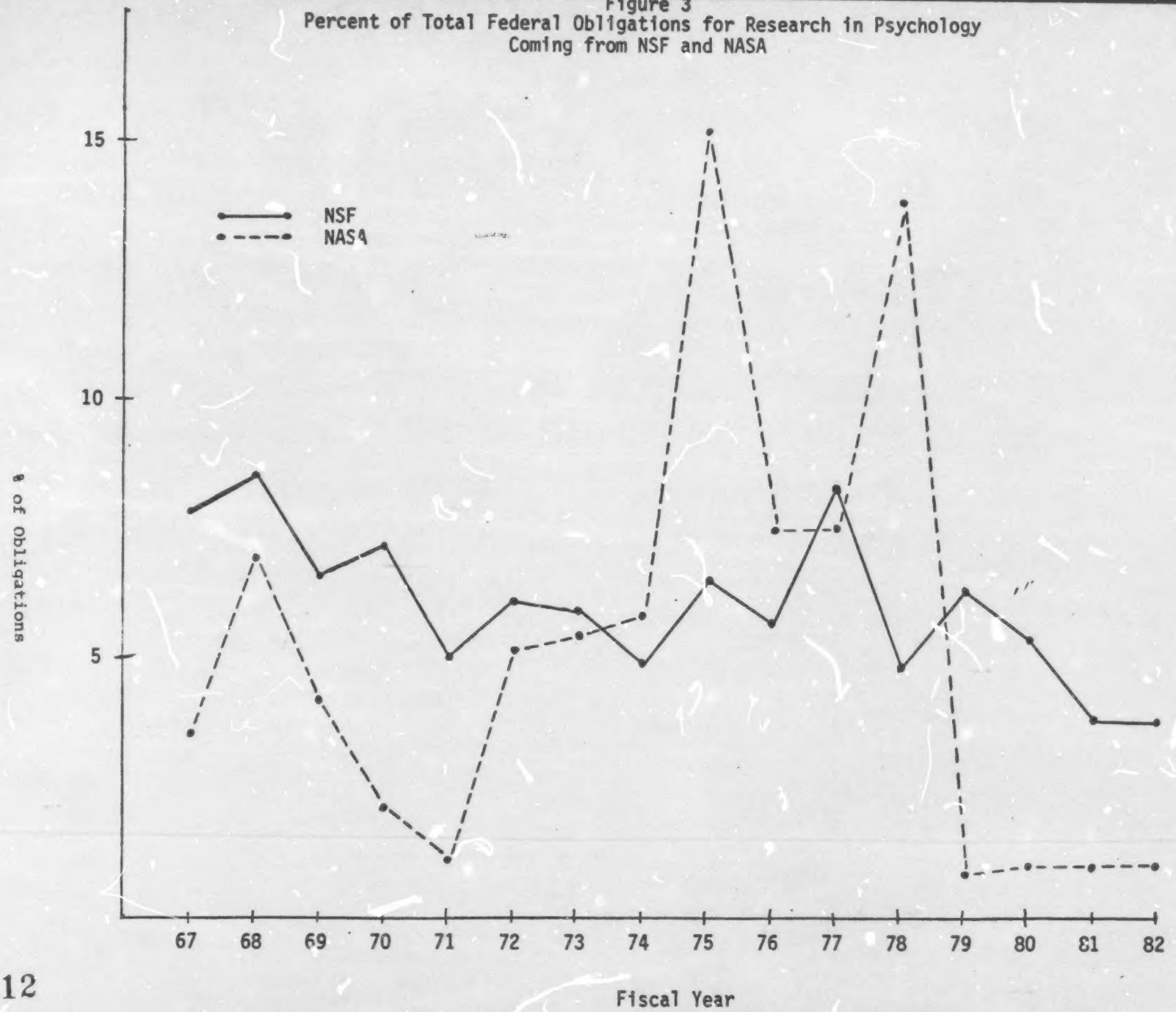
Source: National Science Foundation

Figure 2
Percent of Total Federal Obligations for Research in Psychology
Coming from the Departments of Defense and Health/Human Services Combined



Source: National Science Foundation

Figure 3
Percent of Total Federal Obligations for Research in Psychology
Coming from NSF and NASA



Source: National Science Foundation